

**REMARKS**

Claims 1-40 are pending in the application. This response cancels claim 38, thus claims 1-37 and 39-40 are currently at issue. The Office action objected to the drawings for failing to include reference number 60. The Office action rejected claims 1, 27, 28, and 36-40 as being unpatentable under 35 U.S.C. §103(a) over Sharma et al. (United States Patent No. 5,812,598) or van Hal et al. (United States Patent No. 6,658,134) in view of van Hal, Kaiserwerth et al. (United States Patent No. 3,982,814), Brandt (United States Patent No. 6,738,490), Aoi (JP 5510549A), Iida (JP 2000058357A), Masahiko et al. (JP10-106855), or Saramoto et al. (United States Patent No. 5,594,805). The applicant responds as follows.

**DRAWING OBJECTION**

The applicant has amended the specification to remove identifier 60 from the specification in the paragraph beginning on page 5, line 3. The coil 12 has a bank winding, built as described, but is appropriately identified as simply the coil 12. There is no need for an additional identifier, such as reference number 60 to identify the coil 12 with a bank winding.

**SECTION 103(a) REJECTIONS**

With respect to the rejection of claim 1, the applicant respectfully traverses and requests reconsideration.

The examiner appears to admit that Sharma and van Hal do not teach or suggest a coil having a predetermined winding pattern and a predetermined winding pitch for reducing the parasitic capacitance.

The examiner alleges that Kaiserwerth teaches a predetermined winding pattern and a predetermined winding pitch for reducing the parasitic capacitance. Kaiserwerth does not appear to teach anything about reducing parasitic capacitance, but merely describe reducing impedance resonance for given capacitance. See col. 3, lines 26-42, Figs. 4, 5. In other words, Kaiserwerth merely describes reducing the effect of parasitic capacitance but does not teach reducing the capacitance itself. Thus, Kaiserwerth does not

teach or suggest a predetermined winding pattern and a predetermined winding pitch for reducing the parasitic capacitance.

None of the cited references teach or suggest a predetermined winding pattern and a predetermined winding pitch for reducing the parasitic capacitance. Since none of the references teach or suggest this limitation, no combination of Sharma, van Hal, or Kaiserwerth can teach all the limitations of claim 1. Therefore, the rejection of claim 1 under 35 U.S.C. §103(a) should be withdrawn.

The applicant respectfully traverses the rejection of claim 27 over Sharma in view of van Hal. The examiner appears to be taking Official Notice that winding turns in a first portion and second portion as claimed, where the first portion has a second layer of turns disposed radially outwardly from the first layer of turns, followed by a then another is common knowledge and practice. If that is the case, the applicant requests documentary evidence according to MPEP 2144.03C.

The applicant respectfully traverses the rejection of claim 28 under 35 U.S.C. §103(a) over Sharma, in view of van Hal and Kaiserwerth for reasons similar to those stated above with respect to claim 1.

With respect to claim 36, the applicant respectfully traverses the rejection and requests reconsideration. Claim 36 recites, in part, a winding pitch wherein a space between individual turns is at least three times the thickness of the wire. The examiner admits that van Hal does not teach or suggest such a limitation.

The examiner alleges that Brandt teaches a coil with widely spaced windings (Fig. 3). The examiner suggests that it would be obvious to apply the teachings of Brandt to space windings at a distance equal to multiple thicknesses of the conductive element to prevent interactions between the windings and development of undesirable capacitance effects. While Brandt shows a voice coil having windings, Brandt is absolutely silent on the nature, construction, or effects of the voice coil windings. Neither van Hal nor Brandt teach or suggest, by the drawings or anywhere else in the specifications that it is desirable to space windings at a distance equal to at least three times the thickness of the wire, as recited in

claim 36. In fact, the drawings in van Hal show the opposite, with the windings closely packed and the drawings in Brandt appear to show windings at a distance about equal to the thickness of the wire.

There cannot be a suggestion to space windings at a distance equal at least three times the thickness of the wire when there is no discussion in either reference that discusses any aspect of the coil, winding, or parasitic capacitance, and when the drawings in the two references do not show such spacing. Since neither van Hal nor Brandt teaches or suggests a winding pitch wherein a space between individual turns is at least three times the thickness of the wire and since there is no motivation to combine with any other reference, the rejection under 35 U.S.C. §103(a) should be withdrawn.

With respect to claim 37, the applicant respectfully traverses the rejection and requests reconsideration. Claim 37 recites in part, a plurality of spaced, electrically connected winding modules.

The examiner admits that van Hal does not does not disclose a plurality of spaced, electrically connected winding modules, but alleges that Aoi does teach such coils. While Aoi teaches multiple voice coils 9a - 9d on a bobbin 6, Aoi does not teach electrically connected coils, in fact, it teaches the opposite. "For coils 9a - 9d only the coil opposing to plate 4 is selected via the input aural signal and by the circuit..." (Constitution). Aoi teaches that separate voice coils are wound and individually selected during operation of the speaker. Further, even if Aoi taught spaced windings that were electrically connected, neither reference discusses parasitic capacitance, the effect of spaced windings on parasitic capacitance, or the desirability of reducing such parasitic capacitance, therefore, there is no suggestion to combine these two references. Since the references do not teach all the limitations of claim 37 and since there is no suggestion to combine the references, the rejection under 35 U.S.C. §103(a) should be withdrawn.

Claim 38 stands rejected under 35 U.S.C. §103(a) over van Hal in view of Iida. Claim 38 has been amended to recite that a number of radially disposed layers in the end portion is at least a number of radially disposed layers in at least one horizontally disposed layer in the plurality of horizontally disposed layers.

Van Hal does not disclose the winding having an end portion formed by a first plurality of individual turns originating at a point adjacent the tunnel and expanding radially outwardly to form a boundary layer. Iida, in Fig. 3c, discloses an end portion formed by two layers of turns 1, 2 and 3, followed by a succession of horizontally disposed layers having 3 turns (e.g., 4, 5, 6). Thus, Iida describes an end portion having less radially disposed layers than all of the remainder of the winding.

Neither van Hal nor Iida teach or suggest that a number of radially disposed layers in the end portion is at least a number of radially disposed layers in at least one horizontally disposed layer in the plurality of horizontally disposed layers. Because neither van Hal nor Iida teach or suggest this limitation, the rejection under 35 U.S.C. §103(a) should be withdrawn.

Regarding claim 39, the examiner alleges that it would have been obvious to combine the teachings of van Hal and Masahiko to reduce undesirable parasitic capacitances. The applicant respectfully traverses. Van Hal is silent as to the effect of parasitic capacitance and thus provides no motivation to combine with any other reference. Masahiko teaches the use of insulating layers to reduce parasitic capacitance between two separate, unconnected windings, such as the primary and secondary windings of the transformer shown. Nothing in Masahiko teaches or suggests that an insulating layer between winding layers of a coil would be desirable or have a beneficial effect when only one conductor is used. Without a motivation to combine, the combination of van Hal and Masahiko does not meet the *prima facie* requirement for a rejection under 35 U.S.C. §103(a) and the rejection should be withdrawn.

The rejection of claim 40 is respectfully traversed. The examiner alleges that Sakamoto teaches the use of alternating turns of conductive and non-conductive material and that it would have been obvious to utilize an insulating material between successive spaced turns to reduce undesirable parasitic capacitances. The applicant respectfully points out that the two windings of Fig. 7 of Sakamoto are both conductors, not alternating conductors and insulators. "...the voice coil 1 wherein a general wire made of conductive material C and a composite wire A are wound at the same time to dispose different wires alternately one turn after another," (col. 9, lines 7-10). Sakamoto simply does not teach what the examiner

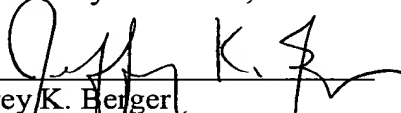
alleges. The goals of the alternately wound wires are not to reduce capacitance, in fact, capacitance is not mentioned in the patent. The examiner admits that van Hal does not teach alternating insulators and Sakamoto does not supply the missing elements to recite all the limitations of claim 40. As above, neither reference has a suggestion to combine nor even hints at a problem with parasitic capacitance. Since neither reference teaches or suggests the limitation of alternating turns of conductive and non-conductive material, the combination does not teach or suggest all the limitations of claim 40. Therefore, the rejection of claim 40 under 35 U.S.C. §103(a) should be withdrawn.

**ALLOWABLE SUBJECT MATTER**

The applicants note with appreciation the examiners finding that claims 2-26 and 29-35 contain allowable subject matter. By way of the above amendments and arguments, the applicant believes the remaining claims are in condition for immediate allowance and such action is requested. No fees are believed due, but should a fee be required, the Commissioner is directed to Deposit Account 13-2855.

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Respectfully submitted,

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